

Remarks:

Claims 3, 5-15, 17-18, and 22-26 remain in this application. Claims 1, 2, 4, 16, and 19-21 have been canceled. Claims 25-26 have been added. Claims 25-26 find support in the specification at page 12 paragraph 29.

Examiner has objected to claims 11-14 and 17 as being dependent upon rejected base claims, but that they would be allowable if rewritten in independent form. These claims have now been rewritten in independent form including all of the limitations of the base claims and any intervening claims. Therefore, claims 11-14 and 17 are in condition for allowance.

“The Specification is objected to as failing to provide proper antecedent basis of the claimed subject matter. Correction of the following is required: It is applicant’s duty to assure all claim terminology is supported in the specification.” Examiner does not cite any particular reason for this objection. Applicant carefully reviewed Examiner’s objection to the specification in the previous Office Action dated 9/29/2004 and made extensive amendments to the specification and claims to ensure proper antecedent basis for the claims. Applicant believes that the claims are properly supported and requests that Examiner withdraw this objection.

Claims 1, 3-5, 7, 15, and 18-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Mathys, Sr. et al.

Examiner points to Mathys’ screw 9 as a positioner and claims that the head is means for preventing the hip implant from rising from the canal while permitting subsidence of the hip implant down into the canal and that the screw is means for anchoring the means for preventing relative to the femoral canal.

Claim 1 has been canceled.

Claim 3 has been amended to specifically claim the femoral hip implant as suggested by examiner. Mathys fails to teach a “stem having a polished and tapered exterior surface that permits the implant to subside distally into a cured cement mantel under load”. Mathys instead teaches a composite stem having a core 1 and an integral sheath 2. The stem has a blunt tip and is inserted into a femoral canal without cement. Thus, Mathys is silent with regard to the need to allow subsidence into a cement mantel and teaches away from the use of a cement mantel. Thus, claim 3 is allowable over Mathys.

Furthermore, Mathys’ screw 9 is placed obliquely through the implant and into the femur. If Mathys’ screw 9 prevents his implant from rising from the femoral canal, then it equally prevents his implant from subsiding distally into the cement mantel. Note that the portion of the implant 7 above the screw 9 is suspended on the screw 9 preventing the implant from subsiding. Mathys specifically states the purpose and effect of screw 9 at column 3 line 67 to column 4 line 2; “displacements between the screw 9 and the bone as well as the prosthesis collar are prevented”. Thus, Mathys specifically states that his implant cannot rise or subside and teaches away from Applicant’s positioner for allowing subsidence. Thus, claim 3 is allowable over Mathys.

Claim 4 has been canceled.

Claim 5 depends from claim 3 and is allowable for the same reasons as claim 3.

Claim 7 depends from claim 3 and is allowable for the same reasons as claim 3. Furthermore, claim 7 claims, "a body including first and second members extending at an angle from one another, . . . the first member being positioned over a portion of the stem, the second member being anchored in the cement mantel between the stem and the canal wall. Mathys' screw 9 is a linear device. Mathys fails to teach "first and second members extending at an angle from one another". Thus claim 7 is allowable over Mathys.

Furthermore, Mathys fails to teach any member "being anchored in the cement mantel". Mathys teaches away from a cement mantel and anchoring of a positioner in such a mantel. Mathys teaches against a cemented stem at column 1 lines 35-43 where he states, "the advantages of the invention are that, thanks to the surface layer of the invention, the shank bio-compatibility is improved as a whole and that direct and firm contact between the shank and the bone is made possible." A cement layer is the antithesis of Mathys' invention. Thus claim 7 is allowable over Mathys.

Claim 15 claims "a first member extending over a portion of the implant such that it limits upward axial motion of the femoral hip implant and permits downward axial motion of the femoral hip implant". As pointed out relative to claim 3, Mathys' screw does not permit downward axial motion of the implant as the implant is suspended on the screw. Thus, claim 15 is allowable over Mathys.

Furthermore, Mathys' screw is a single member and fails to include "a second member extending at an angle from the first member". Thus, claim 15 is allowable over Mathys.

Claim 18 claims a hip implant, bone cement within the femoral canal surrounding the stem, and a positioner. As discussed above, Mathys fails to teach bone cement but instead specifically teaches away from a cemented stem. Furthermore, claim 18 claims "a positioner having an anchor member embedded in the bone cement securing the positioner in the femoral canal adjacent the hip implant". For these reasons, claim 18 is allowable over Mathys.

Furthermore, Mathys' screw 9 has no member "embedded in a bone cement layer". In fact, Mathys' screw has no portion secured "in the femoral canal" by any means. Thus, claim 18 is allowable over Mathys.

Still furthermore, as discussed relative to claim 3, Mathys fails to teach "a retention member engageable with a portion of the femoral hip implant such that it blocks upward motion of the implant out of the canal while permitting downward motion of the implant into the canal. Mathys' screw blocks all motion. Thus, claim 18 is allowable over Mathys.

Claims 19 and 20 have been canceled.

Claims 1-4 and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Carpenter et al.

Claims 1 and 2 have been canceled.

Claim 3 has been amended to specifically claim the femoral hip implant as suggested by examiner. Carpenter fails to teach a "stem having a polished and tapered exterior surface that permits the implant to subside distally into a cured cement mantel under load". Carpenter instead teaches a stem and distal spacer combination that fixes the distal end of the stem and prevents the stem from subsiding. As Examiner points out, the spacer 40 is engaged with the stem by fitting post 46 into bore 52 prior to insertion of the assembly into the uncured cement mantel. When the

cement cures, the spacer is chemically bonded to the cement. See 40:19-27. Thus, the implant is blocked by the chemically bonded spacer from subsiding. Thus, claim 3 is allowable over Carpenter.

Furthermore, Carpenter fails to teach "the positioner including means for preventing the stem from rising out of the cement mantle and the femoral canal beyond a predetermined position by abutment of the stem against the positioner". Carpenter's spacer does not abut the stem if the stem rises. On the contrary, Carpenter's spacer is made to engage the stem so that it is entirely below the stem and incapable of abutting the stem upon the stem arising. Thus, claim 3 is allowable over Carpenter.

Furthermore, Carpenter fails to teach "preventing the stem from rising . . . while permitting subsidence distally into the cured cement mantle". Carpenter is the antithesis of Applicant's invention and a complete teaching away from it in that Carpenter's device is positioned, and chemically bonded to the cured mantle, such that it prevents subsidence, while being incapable of abutting the stem to prevent rising. Thus, claim 3 is allowable over Carpenter.

Claim 4 has been canceled.

Claim 24 claims "inserting an implant positioner adjacent to the femoral hip implant, the implant positioner including an anchor member placed into the cement and a retention member positioned over a portion of the implant such that anchor member becomes firmly attached to the cement upon hardening of the cement and the retention member permits the femoral hip implant to subside down into the cement but prevents the femoral hip implant from rising up out of the cement beyond a predetermined position by abutment of the implant against the retention member." As discussed above, Carpenter's spacer prevents subsidence while being incapable of abutting the stem to prevent rising. Thus, claim 24 is allowable over Carpenter.

Claims 1-10, 15, and 18-23 are rejected under 34 U.S.C. 102(b) as being anticipated by Link.

Examiner states that Link teaches a positioner with means (element 10) for preventing the femoral hip implant from rising out of the canal while permitting subsidence.

Claims 1 and 2 have been canceled.

Claim 3 has been amended to specifically claim the femoral hip implant as suggested by examiner. Link fails to teach a "stem having a polished and tapered exterior surface that permits the implant to subside distally into a cured cement mantle under load". Link instead teaches a cementless stem with a collar including an anchoring 15, 16 to the greater trochanter "such that both the greater trochanter 2, via the anchoring 15, 16, and also the medial area of the bone 3, via direct contact with the adjacent part of the stem 6, participate in the bone taking up the forces acting medially on the prosthesis". The collar is fixed to the stem and to the bone to prevent movement of the stem in either direction. Link is silent with regard to the need to allow subsidence into a cement mantle and teaches away from the use of a cement mantle. Link further teaches away from permitting subsidence by providing teeth (FIG.2) directed downwardly that would resist subsidence. Thus, claim 3 is allowable over Link.

Furthermore, Link fails to teach "the positioner including means for preventing the stem from rising out of the cement mantle and the femoral canal beyond a predetermined position by abutment of the stem against the positioner while permitting subsidence of the stem distally into the cured cement mantle along the canal axis". Link's collar is secured to the stem so that the

stem cannot move relative to the stem. See grooves and ribs 17 and screw 18. Thus, claim 3 is allowable over Link. Notwithstanding the grooves, ribs, and screws, Link's collar would prevent subsidence due to impingement of the neck 8 on the collar 10.

Link's collar is a "support collar" that transmits vertical forces to the bone. See 1:15-27, 2:10-20. Link teaches away from allowing subsidence since the focus of Link's teaching (and invention) is the provision of a collar that prevents subsidence by transferring stem loads to the surrounding bone by creating a shelf on which the stem rests as well as tying the stem to the greater trochanter. Again, Link like the other cited references is the antithesis of Applicant's invention. Thus, claim 3 is allowable over Link.

Claim 4 has been cancelled.

Claim 5 depends from claim 3 and is allowable for the same reasons as claim 3.

Claim 6 depends from claim 3 and is allowable for the same reasons as claim 3.

Claim 7 depends from claim 3 and is allowable for the same reasons as claim 3.

Furthermore, Link fails to teach, a "first member being positioned over a portion of the stem" and a "second member being anchored in the cement mantel between the stem and the canal wall". Link fails to teach a cement mantel. Link fails to teach a member anchored in the cement mantel between the stem and the canal wall. Thus claim 7 is further allowable over Link.

Claim 8 depends from claim 7 and is allowable for the same reasons as claim 7.

Furthermore, Link fails to teach a positioner that is removeably engageable with the stem (claim 3) and comprising means for spacing the stem a predetermined distance from the lateral aspect of the femoral canal. Note that the nut 15 of Link is positioned relative to the outside of the bone and not the femoral canal. Also note that the screw shaft connecting to nut 15 is smooth and is free to slide laterally. Thus, claim 8 is further allowable over Link.

Claim 9 depends from claim 8 and is allowable for the same reasons as claim 8.

Furthermore, Link fails to teach "a spacing member connected to the body a predetermined distance from the second member (means for anchoring), the spacing member being engaged with the stem and the second member (means for anchoring) being engaged with the lateral aspect of the femoral canal to maintain a predetermined spacing between the stem and the lateral aspect of the femoral canal." Thus, claim 9 is further allowable over Link.

Claim 10 depends from claim 9 and is allowable for the same reasons as claim 9.

Furthermore, Link fails to teach a "projection extending medially from the second member (means for anchoring engaged with the canal)". Thus, claim 10 is further allowable over Link.

Claim 15 claims "a first member extending over a portion of the implant such that it limits upward axial motion of the femoral hip implant and permits downward axial motion of the femoral hip implant". As discussed above, Link's collar is specifically designed to carry axial loads and prevent downward axial motion. Thus, claim 15 is allowable over Link.

Claim 18 claims "a stem . . . ; bone cement within the canal surrounding the stem; and a positioner having an anchor member embedded in the bone cement securing the positioner in the femoral canal adjacent the hip implant, and a retention member engageable with a portion of the femoral hip implant such that it blocks upward motion of the implant out of the canal while permitting downward motion of the implant into the canal." As discussed above, Link teaches away from cement fixation and fails to teach and teaches away from a device that allows

downward motion of the stem. Link's collar specifically, and by design, prevents such downward motion. Thus, claim 18 is allowable over Link.

Claim 19 has been canceled.

Claim 20 has been canceled.

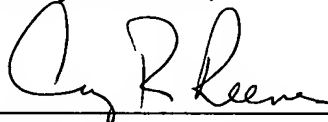
Claim 21 has been canceled.

Claim 22 claims a positioner having "an "L"-shaped body having a first leg positionable over a portion of the femoral hip implant relative to the canal axis and a second leg simultaneously positionable adjacent the canal wall to maintain a predetermined spacing between the femoral hip implant and the canal wall while permitting downward motion of the implant into the canal." As discussed above, Link teaches away from cement fixation and fails to teach and teaches away from a device that allows downward motion of the stem. Link's collar specifically, and by design, prevents such downward motion. Thus, claim 18 is allowable over Link.

Claim 23 depends from claim 22 and is allowable for the same reasons as claim 22.

Applicant has tried to be as clear as possible in any amendments and remarks made in this paper. Applicant invites Examiner to call the number listed below to discuss any portion of this paper that may be unclear or where minor corrections may put the case in condition for allowance to facilitate a timely allowance of this case.

Respectfully submitted,

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